



west virginia department of environmental protection

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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.: R13-3102
Plant ID No.: 009-00123
Applicant: Enterprise TE Products Pipeline Company LLC (Enterprise)
Facility Name: Dominion Interconnect
Location: Colliers, Brooke County
NAICS Code: 486910
Application Type: Construction
Received Date: July 8, 2013
Engineer Assigned: Jerry Williams, P.E.
Fee Amount: \$1,000.00
Date Received: July 8, 2013
Complete Date: August 22, 2013
Due Date: November 20, 2013
Applicant Ad Date: June 29, 2013
Newspaper: *Wheeling Intelligencer*
UTM's: Easting: 539.657 km Northing: 4,467.166 km Zone: 17
Description: Installation of a maintenance flare on a pipeline transporting ethane product.

DESCRIPTION OF PROCESS

The following process description was taken from Permit Application R13-3102:

Enterprise proposes to install a new flare to combust ethane product that must be evacuated from pipeline components only during maintenance operations expected to occur no more than 100 hours per year. The pipeline and all associated components are a closed system carrying valuable ethane product, and the lines will be purged to the flare as necessary during limited maintenance activities. Flaring activities include:

1. Meter Proving at Enterprise sites do not require any flaring during normal proving operations. The only time flaring is necessary is during maintenance on the prover which may occur once every three (3) years. Flaring associated with meter prover maintenance may last approximately 1-2 hours per event.

2. Meter Run Maintenance is only conducted on an as needed basis to repair or replace equipment on the meter run including valves, flanges, gaskets, etc. Flaring associated with meter run maintenance may last approximately 1-3 hours per event.
3. Pig Launcher Purging is only required when pipeline pigging operations are necessary. This could include pipeline cleaning operations, integrity testing, etc. At a minimum, integrity testing is conducted once every five (5) years which requires launching or receiving of an integrity testing tool. Pipeline cleaning operations are performed only on an as needed basis. The material in the pipeline is clean, liquid ethane that will not deposit residues that should require frequent cleaning. Flaring associated with the purging of a pig launcher may last approximately 1-2 hours per event.
4. Pipeline Purging activities are only required during maintenance or upset events on the pipeline. The duration of flaring associated with the pipeline purging varies depending on the length of the pipeline that will require purging. Typically, the pipeline purging would be performed with a larger, portable flare and not the small proposed maintenance flare due to the amount of time that it would take.

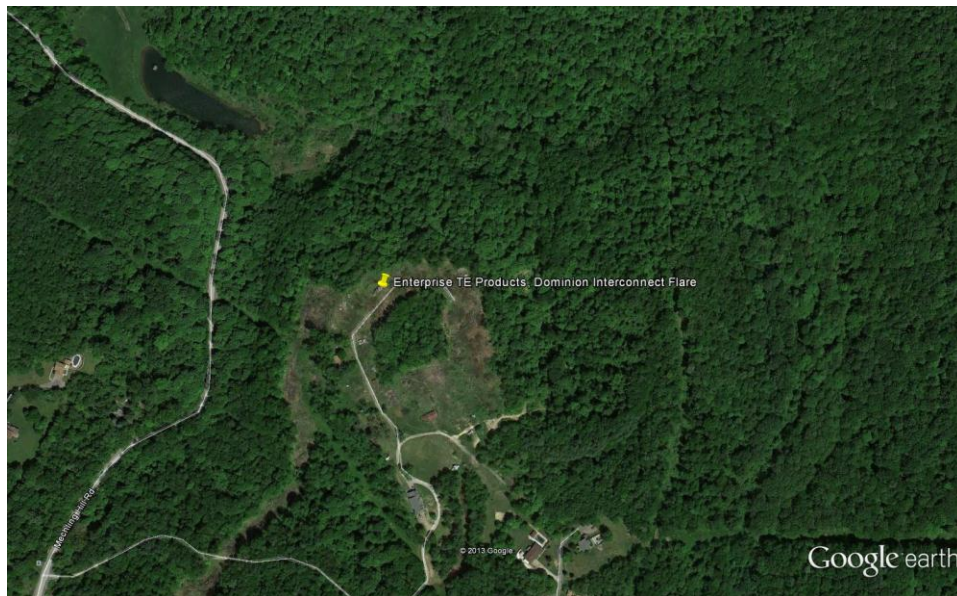
SITE INSPECTION

A site inspection was conducted by Michael Wade of the DAQ Enforcement Section on September 12, 2003. Mr. Wade did not see any problems with locating the facility at the proposed site.

Latitude: 40.354117
Longitude: -80.532994

Directions as given in the permit application are as follows:

From State Highway 2 (Main Street) in Follansbee: Take Highway 27 (Allegheny Street) east and travel 1.4 miles. Turn left on Eldersville Road (continuation of Highway 27) and travel 3.6 miles. Turn left on Mechling Road and travel 0.1 mile. Turn right onto unnamed road and travel 0.5 miles to site.



ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Emissions associated with this construction application consist of one (1) flare to combust ethane product that must be evacuated from pipeline components only during maintenance operations. Emission calculations are based on mass balance, USEPA AP-42 emission factors and greenhouse gas emission factors. Fugitive emissions for the facility are based on calculation methodologies presented in EPA Protocol for Equipment Leak Emission Estimates. Fugitive emissions include leaks from connectors, valves, low bleed pneumatic valves, and flanges.

The following table indicates the control device efficiencies that are required for this facility:

Pollutant	Control Device	Control Efficiency
Volatile Organic Compounds	Flare	98.00 %
Total HAPs		98.00 %

The total facility PTE for the Dominion Interconnect site is shown in the following table:

Pollutant	Facility Wide PTE (tons/year)
Nitrogen Oxides	0.35
Carbon Monoxide	1.90
Volatile Organic Compounds	0.52
Particulate Matter	0.02
Particulate Matter-10	0.02
Particulate Matter-2.5	0.02
Sulfur Dioxide	0.02
Carbon Dioxide Equivalent	767

REGULATORY APPLICABILITY

The following rules apply to the facility:

45CSR6 (To Prevent and Control Air Pollution from the Combustion of Refuse)

The purpose of this rule is to prevent and control air pollution from combustion of refuse.

Enterprise has one (1) flare at the Dominion Interconnect. The flare is subject to section 4, emission standards for incinerators. The flare has an allowable emission rate of 237.6 pounds of particulate matter per hour (assuming a natural gas density of 0.044 lb/ft³). The flare has an hourly particulate matter emissions rate of 0.48 lb/hr. Therefore, the facility's flare should demonstrate compliance with this section. The facility will demonstrate compliance by maintaining records of the amount of natural gas consumed by the flare and the hours of operation. The facility will also monitor the flame of the flare and record any malfunctions that may cause no flame to be present during operation.

45CSR13 (Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Administrative Updates, Temporary Permits, General Permits, and Procedures for Evaluation)

45CSR13 applies to this source due to the fact that Enterprise is defined as a "stationary source" under 45CSR13 Section 2.24.a, which states that a facility is subject to any substantive requirement of an emission control rule promulgated by the Secretary. Enterprise's proposed flare is subject to operational requirements under 45CSR6. Enterprise has published the required Class I legal advertisement notifying the public of their permit application, and paid the appropriate application fee (construction).

45CSR22 (Air Quality Management Fee Program)

This facility is a minor source and not subject to 45CSR30. Enterprise is required to keep their Certificate to Operate current.

40CFR60 Subpart 60.18 (General Control Device and Work Practice Requirements)

40CFR60 Subpart 60.18 contains requirements for control devices when they are used to comply with applicable subparts of 40CFR60 and 40CFR61. The flare that Enterprise has proposed to control emissions from the tanks and truck loading is subject to this rule. Enterprise will be required to do the following:

- The flare shall be designed and operated with no visible emissions per Method 22 except for periods not to exceed a total of five (5) minutes during any two (2) consecutive hours.
- The flare shall be operated with a flame present at all times.
- Method 22 shall be used to determine the compliance of the flare with the required visible emissions provisions.
- The presence of a flare pilot flame shall be monitored using a thermocouple or any other equivalent device.

The following rules do not apply to the facility:

40CFR60 Subpart OOOO (Standards of Performance for Crude Oil and Natural Gas Production, Transmission and Distribution)

EPA published in the Federal Register new source performance standards (NSPS) and air toxics rules for the oil and gas sector on August 16, 2012. 40CFR60 Subpart OOOO establishes emission standards and compliance schedules for the control of volatile organic compounds (VOC) and sulfur dioxide (SO₂) emissions from affected facilities that commence construction, modification or reconstruction after August 23, 2011. Enterprise ATEX pipeline that this flare is located on exclusively transports ethane. 40CFR60 Subpart OOOO regulates pipeline facilities for crude oil and natural gas. Therefore, Enterprise would not be subject to this rule.

40CFR60 Subpart KKK (Standards of Performance for Equipment Leaks of VOC from Onshore Natural Gas Processing Plants)

40CFR60 Subpart KKK applies to onshore natural gas processing plants that commenced construction after January 20, 1984, and on or Before August 23, 2011. The Dominion Interconnect site was constructed after August 23, 2011 and is not a natural gas processing plant, therefore, Enterprise would not be subject to this rule.

40CFR60 Subpart JJJJ (Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (SI ICE))

There are no SI ICEs at the Dominion Interconnect site. Therefore, Enterprise would not be subject to this rule.

45CSR14 (Permits for Construction and Major Modification of Major Stationary Sources of Air Pollutants)

45CSR19 (Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution which Cause or Contribute to Nonattainment)

The Dominion Interconnect site is located in Brooke County which is a non-attainment county for Particulate Matter 2.5. Because Brooke County is a non-attainment county, 45CSR19 possibly applies to this facility.

As shown in the following table, Enterprise is not subject to 45CSR14 or 45CSR19 review.

Pollutant	PSD (45CSR14) Threshold (tpy)	NANSR (45CSR19) Threshold (tpy)	Dominion Interconnect PTE (tpy)	45CSR14 or 45CSR19 Review Required?
Carbon Monoxide	250	NA	1.90	No
Nitrogen Oxides	250	100	0.35	No
Sulfur Dioxide	250	100	0.02	No
Particulate Matter 2.5	250	100	0.02	No
Ozone (VOC)	250	NA	0.52	No
Greenhouse Gas (CO ₂ e)	100,000	NA	767	No

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

There will be small amounts of various non-criteria regulated pollutants emitted from the combustion of natural gas. However, due to the concentrations emitted, detailed toxicological information is not included in this evaluation.

AIR QUALITY IMPACT ANALYSIS

Modeling was not required of this source due to the fact that the facility is not subject to 45CSR14 (Permits for Construction and Major Modification of Major Stationary Sources of Air Pollutants) as seen in the table listed in the Regulatory Discussion Section.

SOURCE AGGREGATION

“Building, structure, facility, or installation” is defined as all the pollutant emitting activities which belong to the same industrial grouping, are located on one or more contiguous and adjacent properties, and are under the control of the same person.

The maintenance flare is located in Brooke County and will be operated by Enterprise, who is the owner. The following is a detailed summary of the source aggregation determination:

1. The maintenance flare will operate under SIC code 4613 (Refined Petroleum Pipelines). The Dominion Transmission pipeline will operate under SIC code 4612 (Crude Petroleum Pipelines). Therefore, the Enterprise maintenance flare does share the same SIC code as other related sources.
2. “Contiguous or Adjacent” determinations are made on a case by case basis. These determinations are proximity based, and it is important to focus on this and whether or not it meets the common sense notion of a plant. The terms “contiguous” or “adjacent” are not defined by USEPA. Contiguous has a dictionary definition of being in actual contact; touching along a boundary or at a point. Adjacent has a dictionary definition of not distant; nearby; having a common endpoint or border.

Enterprise will construct its maintenance flare on property owned by Dominion NGL pipeline. There are no other Enterprise facilities located on contiguous or adjacent properties.

3. The Enterprise and Dominion facilities in question are owned and operated by separate companies with no common management or operational control over activities at the site. The operations do not share common workforces, plant managers, security forces, corporate executive officers or board executives. Neither of the facilities' operations supports the operation of the other facility. Therefore, no support and/or dependency relationship exists between the two (2) companies.

The Enterprise flare and Dominion pipeline share the same industrial grouping. However, the two (2) facilities are not under common control. Therefore, the emissions from these two (2) facilities should not be aggregated in determining major source or PSD status.

MONITORING OF OPERATIONS

Enterprise will be required to perform the following monitoring and recordkeeping associated with this permit application:

1. Monitor and record quantity of natural gas consumed for the flare.
2. Monitor the presence of the pilot flame with a thermocouple or equivalent.
3. Maintain records of testing conducted in accordance with the permit. Said records shall be maintained on-site or in a readily accessible off-site location
4. Maintain the corresponding records specified by the on-going monitoring requirements of and testing requirements of the permit.
5. Maintain records of the visible emission opacity tests conducted per the permit.
6. Maintain a record of all potential to emit (PTE) HAP calculations for the entire facility. These records shall include the natural gas compressor engines and ancillary equipment.
7. The records shall be maintained on site or in a readily available off-site location maintained by Enterprise for a period of five (5) years.

RECOMMENDATION TO DIRECTOR

The information provided in the permit application indicates Enterprise's Dominion Interconnect meets all the requirements of applicable regulations. Therefore, impact on the surrounding area should be minimized and it is recommended that this location should be granted a 45CSR13 construction permit for this proposed permitting action.

Jerry Williams, P.E.
Engineer

Date